REMARKS

Claims 2-3, 5-15, 18, 20, 22-23 and 26-30 are pending in the application.

Claims 2, 26 and 30 are amended above to clarify what it is that the Applicant regards as the invention.

No new matter is added to the application by way of these claim amendments.

I. THE INVENTION

The invention is directed generally towards a device that is an electromagnetic radiation absorber. The device includes a conductor layer and a dielectric layer. The conductor layer includes a plurality of slits. The devices are in theory capable of absorbing any wavelength of electromagnetic radiation. Thus, the wavelengths over which the devices are operable span an extremely large range. A single device does not absorb the entire range of wavelengths of electromagnetic radiation. Instead, the claimed devices are tailored to absorb a subset range of wavelengths selected from the range of wavelengths making up the electromagnetic spectrum. Thus, one skilled in the art would understand the term λ_{min} to λ_{max} to refer to a wavelength range – within the electromagnetic spectrum - that is desired to be absorbed. For example, paragraph [0032] discloses the claimed structure for absorbing wavelength radiation in the range of 28-35 millimeters. Similarly, paragraph [0030] discloses a structure for absorbing wavelengths in the microwave range. The selection of the range of wavelengths that are desired to be absorbed then establishes the parameters of the claimed grating arrangement and absorber thickness.

II. THE 35 U.S.C. §112, 2nd PARAGRAPH REJECTION OF CLAIMS 2-15

The examiner rejected claims 2 and 26-30 for being indefinite under 35 U.S.C. 112, 2nd paragraph. The Examiner's rejections are overcome or they are traversed as set forth below.

- The examiner rejected claim 2 for indefiniteness because of use of term "flexible" in the claim. The examiner's rejection is overcome by deleting the phrase including the word "flexible" from claim 2. The examiner similarly rejected claim 27. However, the applicant has chosen to leave the term "flexible" in claim 27 because the meaning of the term is clear from the specification. In particular, the specification discloses at paragraph [0015] that the multilayer structure is flexible enough to allow to be applied to curved surfaces. This description of the

flexible nature of the claimed device provides a minimal definition of flexibility and clearly defines the invention of claim 27 to one skilled in the art.

- The examiner rejected claims 2 and 26 and dependent 3, 9 and 20 for alleging that the terms λ_{min} and λ_{max} have no limiting effect. The examiner's rejection is hereby traversed. As discussed in Section I above, it is clear from the specification that the claimed device is useful for absorbing electromagnetic radiation having a specified wavelength range where the wavelength range falls within the electromagnetic spectrum. In particular, λ_{min} to λ_{max} refers to a wavelength range within the electromagnetic spectra that the claimed device absorbs. Selection of the wavelength range to be absorbed then establishes the parameters of the wavelength grating and absorption layer thickness. Thus, one of skill in the art upon reading the specification as a whole would clearly understand λ_{min} to λ_{max} to refer to the electromagnetic wavelength range being absorbed and would further understand that the wavelength range being absorbed is a subset of the wavelength range making up the electromagnetic spectra. For at least these reasons, independent claims 2 and 26 and dependent claims 3, 9 and 20 are definite to one of skill in the art at the time of the invention.
- The examiner rejected claims 2 and 26 for use of the term "sub wavelength dimension". Claims 2 and 26 are amended above to remover the objectionable term from the claims.
- The examiner rejected claim 28 for use of the term "bigrating". The examiner's rejection is traversed because "bigrating" is well known term of art. Bigrating is a term of art that refers to a two-dimensional diffraction grating. This is a commonly used term that would be well understood by one skilled in the art. (See U.S. Patent No. 6,188,519 – Abstract). Moreover, bigrating refers to a specific type of grating structure. Therefore, it would be clear to a person of skill in the art that claim 28 requires the plurality slits of claim 26 be oriented in a bigrating structure. Claim 28 is believed to definite and allowable for at least this reason.
- The examiner rejected claim 29 for use of the term "actively variable refractive index" because the term is unclear. The term "actively variable refractive index"

finds support at paragraph [0038] of the specification where methods for constructing a frequency selective structure are discussed.

- The examiner rejected new claim 30 because it is unclear from the claim where certain of the claim elements are positioned with respect to one another. The examiner's rejection of claim 30 is traversed. Claim 30 is amended above to refer to the "dielectric" as a "dielectric layer". Claim 26 is directed to a device including a "conductor layer" in contact with and a "dielectric layer". Claim 30 introduces a "further conductor layer" and requires the "dielectric layer" to be sandwiched between the "conductor layer" and the "further conductor layer". Therefore, the orientation of the three layers of the structure of claim 30 with respect to one another is clearly recited in claim 30.

II. THE ALLOWABLE SUBJECT MATTER

The Applicant acknowledges that the examiner has indicated that all claims would be allowed if the claims are redrafted to overcome the section 112, 2nd paragraph rejections.

CONCLUSION

All pending claims 2-3, 5-15, 18, 20, 22-23 and 26-30 are believed to be allowable for the reasons indicated above. Favorable reconsideration and allowance of all pending claims is, therefore, courteously solicited.

Respectfully submitted,
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